4.15. Whananaki

Maps of inundation depth and maximum current speed for Whananaki are presented in Figures 82 – 87. Some inundation is predicted along the north shore of Whananaki Inlet from the South American event, with maximum water depths of about 1 m and currents speeds greater than 1 m s^{-1}. The spit at the entrance of the inlet is slightly inundated in a few locations, and the major roads leading north and south may be flooded in places. With sea level rise, the extent and depth of inundation increases.

Predicted inundation for the TKSZ M_w8.5 event occurs along the northern shore of the inlet, submerging Whananaki North Road with water depths exceeding 2 m and current speeds exceeding 2.5 m s^{-1}. Inundation to the south, covering Whananaki South Road and in the bay south of Pitokuku Point is also evident. The inundation from the M_w9.0 event is very heavy over the whole region, with water depths exceeding 5 m in Whananaki, Whananaki South and on the entrance spit. Maximum current speeds exceed 7.5 m s^{-1} of relatively large areas, posing a strong damage and erosion risk.

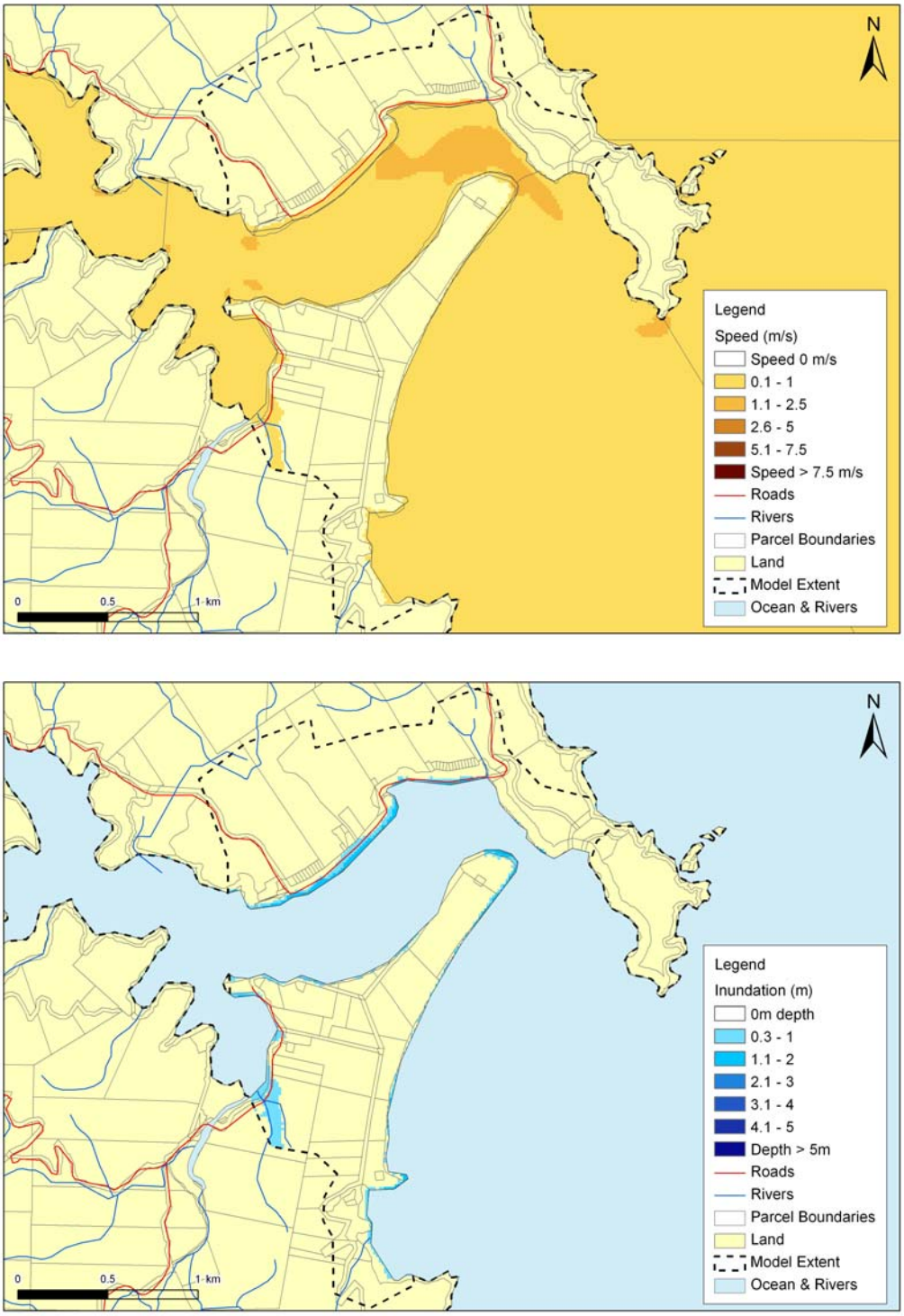

Figure 82: Whananaki: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS (to extent of LIDAR).

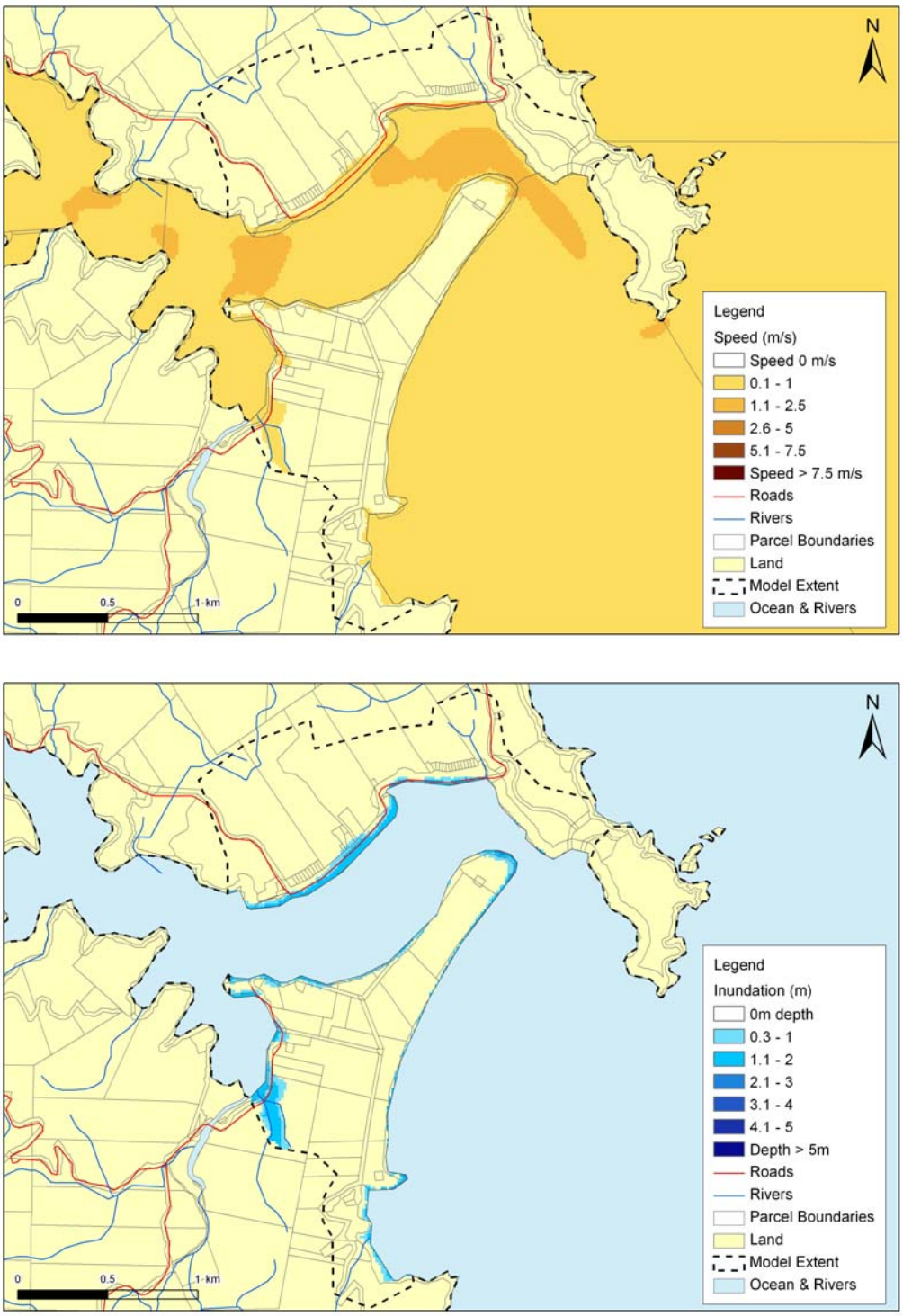

Figure 83: Whananaki: Maximum inundation speed (upper) and depth (lower) plots for the South American tsunami scenario at MHWS + 50cm (to extent of LIDAR).

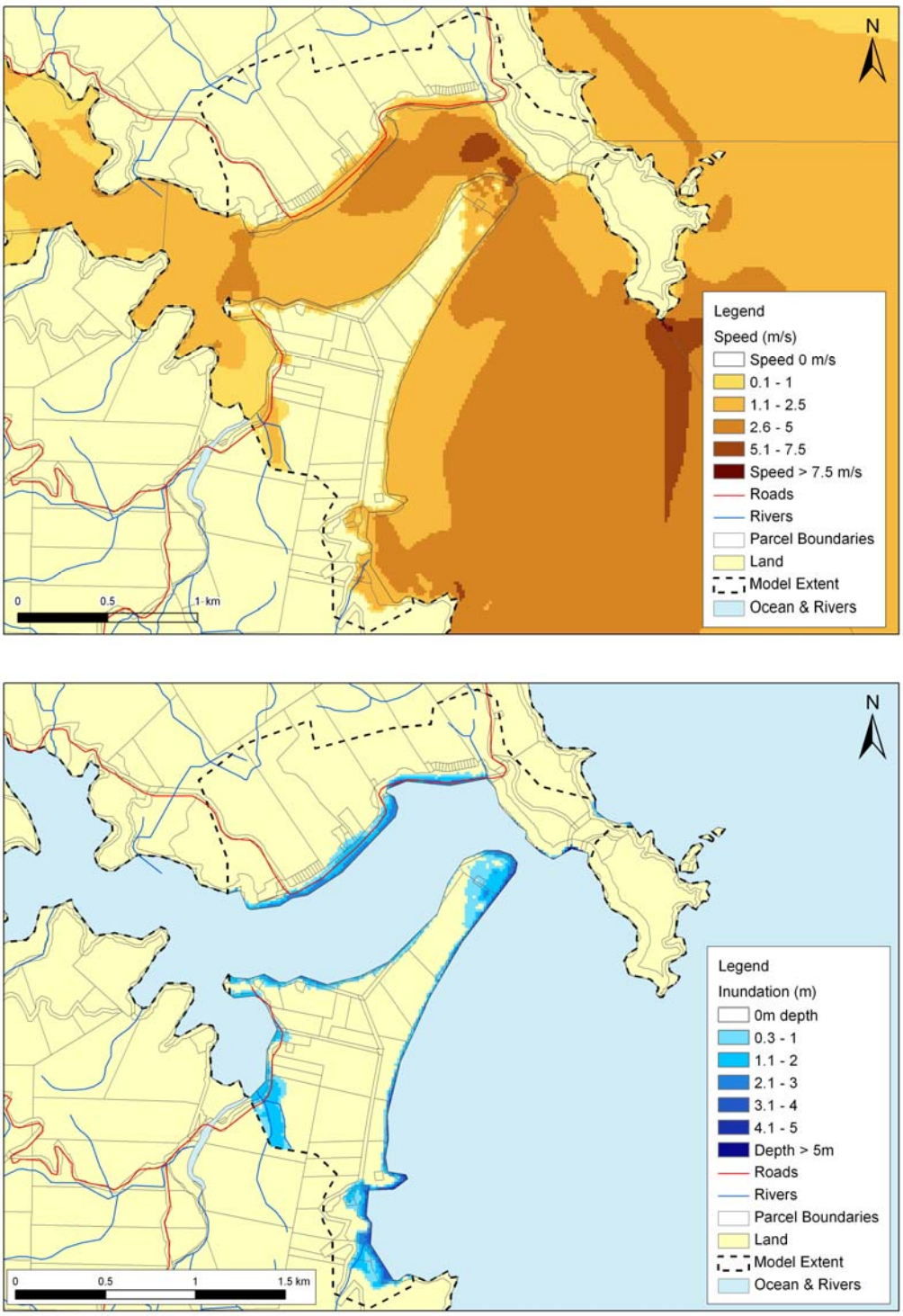

Figure 84: Whananaki: Maximum inundation speed (upper) and depth (lower) plots for the M_w8.5 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LIDAR).

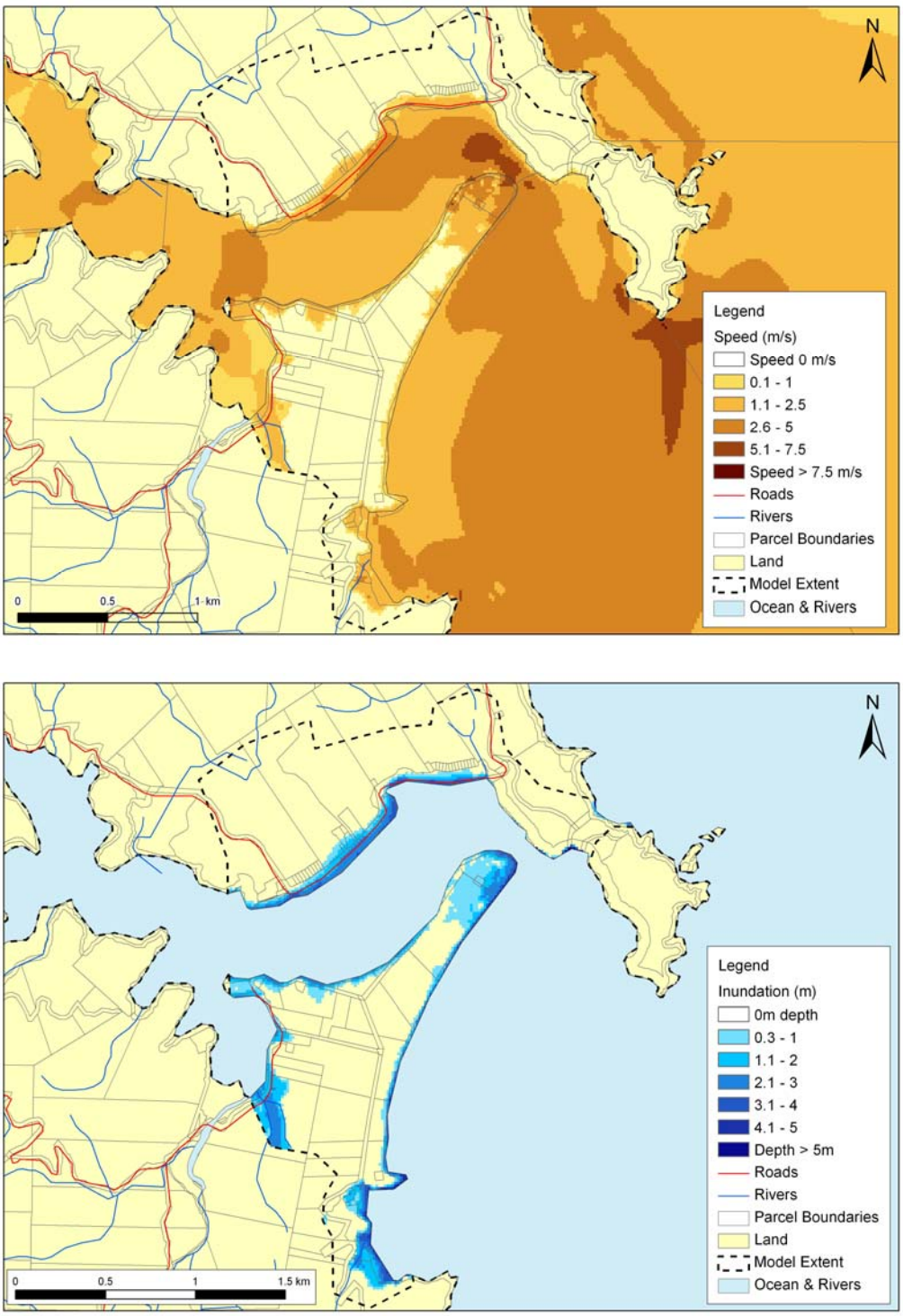

Figure 85: Whananaki: Maximum inundation speed (upper) and depth (lower) plots for the M_w8.5 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LIDAR).

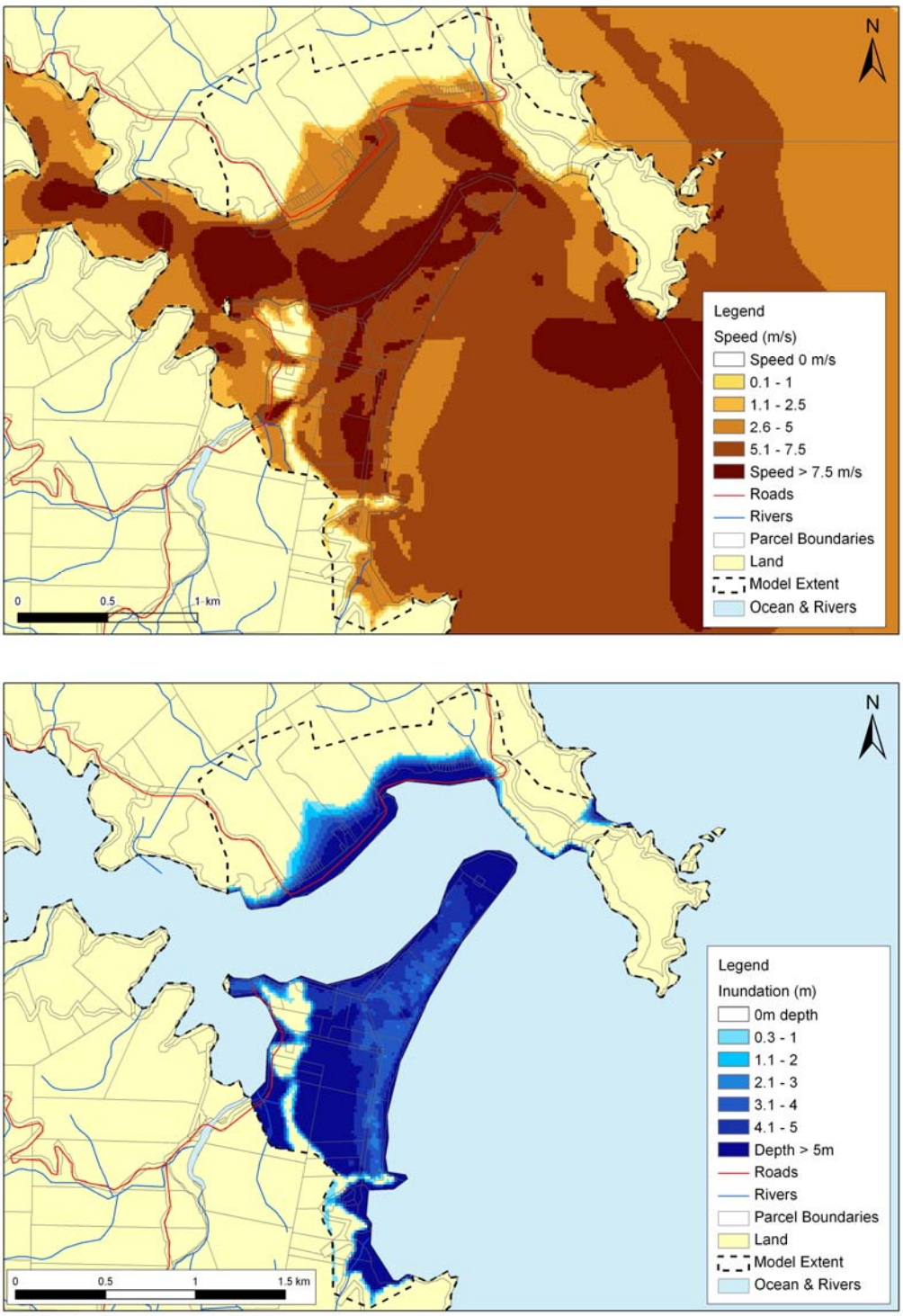

Figure 86: Whananaki: Maximum inundation speed (upper) and depth (lower) plots for the M_w9.0 Tonga-Kermadec subduction zone scenario at MHWS (to extent of LIDAR).

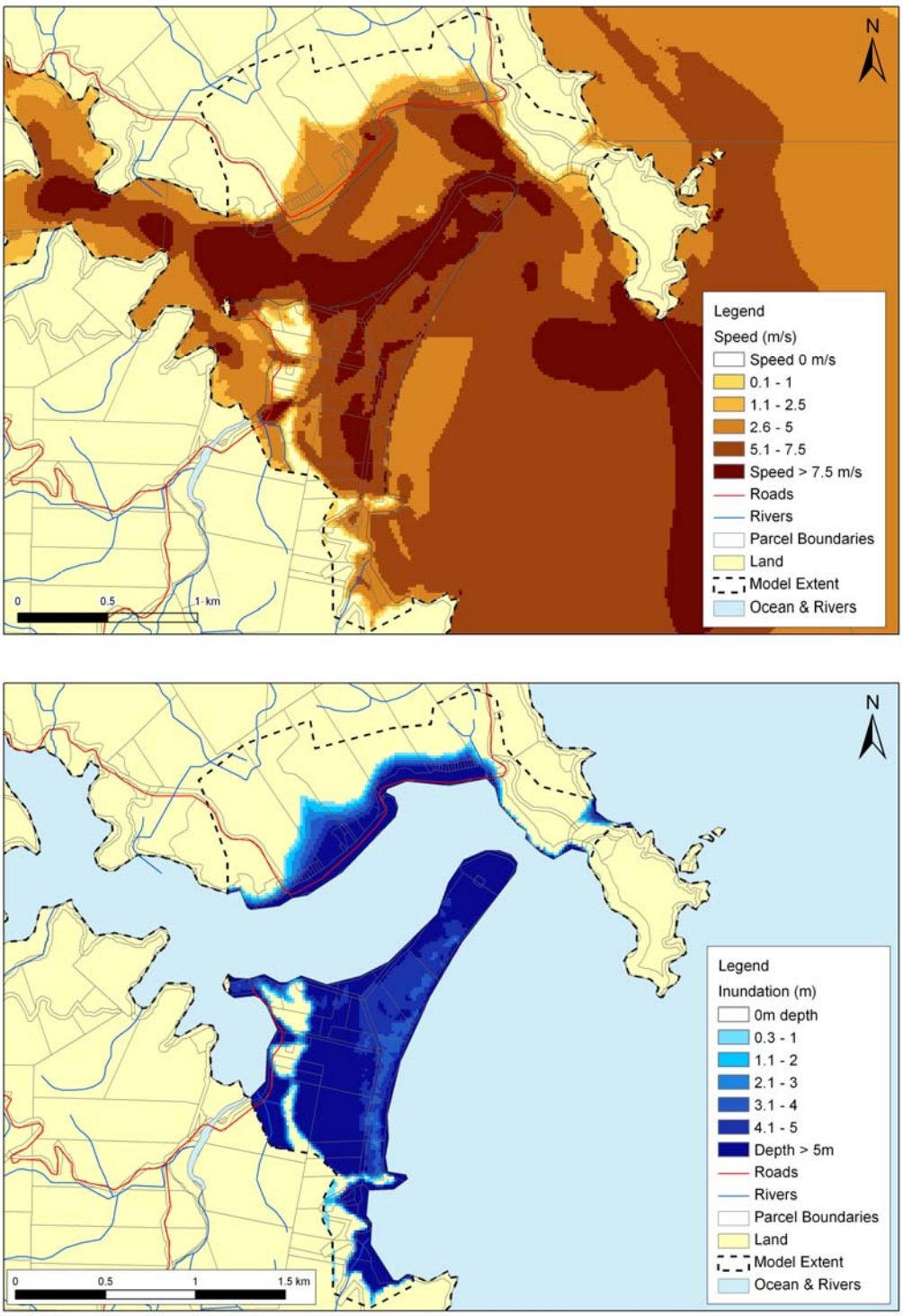

Figure 87: Whananaki: Maximum inundation speed (upper) and depth (lower) plots for the M_w9.0 Tonga-Kermadec subduction zone scenario at MHWS + 50cm (to extent of LIDAR).